

in the present pamphlet, consists, as his lordship states, of—

"A locomotive engine, weighing 34 tons, and of 26-horse power, designed by Mr. Gooch. It has a double capstan attached. The engine moves across the centre of the field on a light portable railway. The ploughs advance and recede on either side of the railway, at right angles to it. The plough employed consists of four ordinary, and the like number of subsoil ploughs, fixed in a frame; it is directed by a person standing upon a small platform. Two such ploughs, one on either side of the railway, alternately advance and recede; the advancing plough working, the other idle until it regains its proper position for ploughing the next four furrows. The ploughs are attached to an endless chain, 150 yards in length. Provision is made in case they strike against any impediment. Such a machine would perform the work usually done by 16 ploughs, driven by as many men, and drawn by 32 horses. It would save the labour of 31 horses and eight men; and yet, in saving labour, would, as machinery always does, provide additional means of productive employment.

*An Introduction to the Study of Gothic Architecture.* Oxford and London: J. H. Parker. THOSE who desire to get without trouble a general idea of the progress of Gothic architecture will find this little book useful. It was originally written as part of a series of elementary lectures, recommended by the committee of the Oxford Architectural Society to be delivered to the junior members of the society in 1849, and being thought useful, Mr. Parker was requested to publish it. It is largely illustrated and nicely printed. The last chapter is on French Gothic, and its comparative progress, a subject which well deserves to be further investigated. Some of the French antiquaries have thrown difficulties in the way by claiming for their buildings much earlier date than can be justified. It would seem, however, that they are now admitting their error.

*Review of Report of General Board of Health on Metropolitan Water Supply.* By S. C. HOMERSHAM, C.E. Weale, High Holborn. This is virtually a pleading against the Board of Health Report and in favour of the Watford Scheme for collecting water from the chalk strata through springs above the level of London: indeed, the review is in the form of a report to the directors of that scheme. It contains a good deal of interesting matter, however, and we are glad to see that the rain-water scheme of the Board of Health appears to have at least strengthened the disposition of the supporters of other schemes to adopt efficient means of softening, and, where necessary, purifying the hard-water of the metropolitan districts. To this end, the process contemplated by Mr. Homersham, as engineer of the Watford Scheme, is one also recommended by the Board of Health, and generally received with favour, namely, Professor Clark's, of Aberdeen. "The Watford spring-water," he says, "as explained in my report to you dated January last, may be reduced by Clark's process (from 18 degrees and upwards according to Dr. Lyon Playfair) to 34 degrees of hardness, and without having pledged you to carry out this process [they ought to be pledged to adopt some process, however] provision was made in the plans deposited in November, 1849, to procure an advantageous site for erecting works necessary for that purpose, and ever since last autumn I have been in communication with Professor Clark." &c. The process in question, as our readers may remember, consists simply in the precipitation of the hardening bicarbonate of lime by the addition of quick lime which converts it into insoluble carbonate of lime, at the same time defecating the water from animal and vegetable impurities.

We agree with Mr. Homersham in believing that "the introduction by a new company of a pure, soft, and cheap water, distributed on the system of constant supply, would immediately force the established companies also to soften and purify their waters, or to resort to better sources, to lower their charges, and to adopt the continuous supply, with an expedition and completeness that would startle."

Having already given place to points of objection to the Board of Health's scheme, as discussed in the *Institute of Architects*, and elsewhere spoken of the Watford scheme, we will not occupy more space at present on a

subject which will doubtless turn up again at a more fitting time.

### Miscellaneous.

THE ELECTRO-TELEGRAPHIC UNION OF BRITAIN AND FRANCE has been signed and sealed. On Wednesday last week, at 9 P.M., the great fact was practically established. The *Goliath* steam-ship had then "paid out" the line of wire from Dover to Cape Grisnez, and mutual congratulations were immediately passed between the two nations. "The real calm of peace between them," says the *Journal des Débats*, "is the protecting pipe which has just been laid across the channel, preserving the wire of the telegraph." Of this said pipe, however, which, as we see from a piece of it placed in our hands, is of gutta percha, and of considerable thickness, well laid on, we can only say that we hope the peace will not be broken when "the pipe is out." We are still of opinion that gutta percha is not likely to be a permanent insulator in sea-water and among the fishy tribes. But that it is a perfect insulator in the meantime cannot be doubted, and it may be so for some considerable period. As it is, "the feat or scheme of yesterday, has become the fact of to-day." Let this never be forgotten when we feel inclined to ridicule some new idea which may seem to be as preposterous to many as this one once did.—We regret to observe, since writing this paragraph, that although the line, as reported down to yesterday morning, seems to have remained entire across the whole width of the Channel, at Cape Grisnez the wash of the sea amongst the rocks on Wednesday last destroyed a leaden protector laid on there to the wire, and has broken the latter itself: iron is to be substituted; and should the one wire answer, it is intended to have others in reserve in case of such accidents.

BALLOON RAILWAYS.—Major Browne, of Great Portland-street, has addressed a letter to the merchants and bankers of Liverpool, proposing the establishment of a balloon railway across the great desert of Africa. He suggests the establishment of a terminus near Morocco, whence he would lay 1,000 or 1,500 miles of single rails into the desert. The rails are for the guidance of the balloons, which are to carry fifteen persons each. An immense and lucrative trade with the interior, the major conceives, would be carried on by this means. He offers to exhibit his models free of expense. The major's balloons, like our more primitive shipping, would of course be dependent on the wind, and liable to be wind-bound at inconvenient seasons, however smoothly all might go with the rails in the desert. It seems to us rather singular, by the way, that no one but ourselves appears to perceive that the most feasible chance of realising a practical system of ballooning would be by imitating nature as far as possible. Now, although the structure of birds, with their great development of air cells and other advantages, be such that their surplus weight is small compared with their power, we never find a bird without such surplus weight to be overcome by actual working power, and that so persistently, that without the continued, or at least the occasional, exercise of such power, it will to a certainty fall to the ground. Why not apply such a principle to ballooning, then? Use gas to diminish the weight of apparatus, but never to buoy it altogether up and carry it away: leave always a little surplus weight as a point of resistance to be overcome by working power alone. Whether such a power be yet sufficiently attainable is another question.

UNNECESSARY SCAFFOLDING.—On passing the west end of Hyde Park-gardens a day or two since my attention was directed to what builders please to call a splendid piece of scaffolding, and if it were designed to support tons instead of cwt. it might have some claim to merit; but to erect such a forest of wood merely for the purpose of supporting a few men while cleaning and painting the outside of a house is, in my eyes, a marvellous piece of absurdity, independently of the tax upon the occupier, who is compelled to pay extravagantly for unnecessary work; and the sooner this absurd practice of scaffolding for such purposes is abolished the better. A few well-placed ladders to support a light stage

for the men to work on would answer all the purpose; for instance, secure one ladder horizontally upon the parapet or upper wall of the house, and attach the ends of two erect ladders to it, some 15 or 20 feet apart, the beams being secured to the ground. A light skeleton stage of wood about 30 feet by 3½ walled in about 3 feet high with coarse canvas, for the men to work in, might then be suspended by two tackle-falls from the upper ends of the erect ladders, at a sufficient distance to clear the cornices and other projections, which with guys properly arranged to direct and steady the stage, the men could work much better and more securely than they possibly can by the present cumbersome and expensive mode of scaffolding.—ONE WHO HAS PAID FOR USELESS SCAFFOLDING.

WORKER BY LOTIS PHILIPPE.—Speaking of the death of Louis Philippe, the *Ateneum* says:—"The establishment of a museum at Versailles, though a work not done altogether in good taste,—the great public buildings which he erected, or completed, in Paris,—and the monuments of the past which he took under his charge, with a lively sense of their beauty and importance,—constitute his claim to a notice in our columns. Paris represents three of her rulers conspicuously in her streets—Louis XIV., Napoleon, and Louis Philippe. The age of Charles II. is hardly more apparent in the City of London than is the influence of Louis Philippe in the squares and open spaces of Paris. He was fond of art. The Spanish school attached to the Louvre was of his formation; and the Stanhope Collection—a gift from a countryman of our own—was made by him as accessible to the people of France as if it had been given to the nation and not to an individual. When we look at the buildings in London erected under the influence of George IV., and compare them with those in Paris erected under the influence of Louis Philippe, we feel the insignificance of the Guelph and the comparative grandeur of the Bourbon.

EXTERNAL DECORATIONS.—A bookselling firm in New York, U.S., who are about erecting a new store, have commissioned Mr. Brown, an American sculptor, to execute a large bas-relief in bronze, as an ornament for the front of the building.

SALES OF HOUSES AND OTHER PROPERTY. Messrs. Farebrother, Clark, and Lye, lately sold, amongst other property, a freehold house and shop, No. 37, Blackfriars-road, let at 90*l.* per annum, for 1,490*l.*; No. 38, let at 100*l.* per annum, for 1,670*l.*; No. 39, let at 92*l.* 10*s.* per annum, for 1,550*l.*; No. 43, let at 98*l.* per annum, for 1,290*l.*; a leasehold house, held for twenty-one years, in Gloucester-place, New-road, 37*l.*; a disto, No. 4, Fitzroy-street, held for a short term, 270*l.*; a freehold residence, known as Oak Lodge, Southgate, Middlesex, with sixty-seven acres of pasture and arable land, for 7,060*l.*; a leasehold estate at Mile-end, held for fifty-two years (by the mortgagee), for 6,660*l.*; Whitton Wharf, with house and limekiln, and eight acres of land, 1,500*l.*; a water corn-mill, working three pair of stones, the Mill Inn public-house, and thirty-eight acres of land, for 2,590*l.*

CHARING-CROSS BRIDGE COMPANY.—The last half-yearly report states that the tolls for half-year ending 31st July, amounted to 3,118*l.* 11*s.* 7*d.*, being less by 110*l.* 6*s.* 4*d.* than for corresponding period of previous year. There was a sum available for dividend to the amount of 1,337*l.* 14*s.* The claim of the Hungerford Market Company, amounting to 500*l.*, had been amicably settled, and the balance due to Mr. Chadwick, for the erection of the bridge and approaches, having been certified to be 3,396*l.*, the directors have satisfied this claim. The directors have communicated with the South-Western Railway directors, to secure their co-operation in carrying out the project for the new street between the York and Bedford-roads. By the present mode of lighting the bridge a saving of 50*l.* per annum is effected.

COMPLETION OF THE ARTERIAL RAIL-SPRING AT KIRKBRIDGE.—Dr. Granville announces in the *Times*, that this great and tedious work has at length been so far completed that, on 12th instant, a jet was exhibited, springing with immense force to the height of 58 feet from a depth of 1,878½ feet of bore, and spreading out like a palm-tree from a column of four inches in diameter. The stratum